

Implementing DevOps Solutions and Practices Using Cisco Platforms (DevOps)

COURSE OVERVIEW:

The Implementing DevOps Solutions and Practices Using Cisco Platforms (DEVOPS) v1.0 course teaches you how to automate application deployment, enable automated configuration, enhance management, and improve scalability of cloud microservices and infrastructure processes on Cisco® platforms. You will also learn how to integrate Docker and Kubernetes to create advanced capabilities and flexibility in application deployment. This course prepares you for the 300-910 Implementing DevOps Solutions and Practices Using Cisco Platforms (DEVOPS) certification exam.

This course will help you:

- Gain the high-demand knowledge and skills to implement automation, streamline container orchestration, and enhance scalability
- Learn the skills to maximize the lightweight design of containers to scale more quickly and allow more responsiveness to website traffic load
- Prepare for the 300-910 DEVOPS exam

WHO WILL BENEFIT FROM THIS COURSE?

This course is designed for network and software engineers interested in automation and programmability and who hold job roles such as:

- Account manager
- Consulting systems engineer
- Network administrator
- Network engineer
- Network manager
- Sales engineer
- Systems engineer
- Technical solutions architect
- Wireless design engineer
- Wireless engineer

PREREQUISITES:

- Before taking this course, you should have the following knowledge and skills:
- Basic programming language concepts and familiarity with Python
- Basic understanding of compute virtualization
- Ability to use Linux, text-driven interfaces, and CLI tools, such as Secure Shell (SSH), bash, grep, ip, vim/nano, curl, ping, traceroute, and telnet
- Foundational understanding of Linux-based OS architecture and system utilities
- CCNA® level core networking knowledge
- Foundational understanding of DevOps concepts
- Awareness and familiarity with continuous integration, continuous deployment, and continuous delivery (CI/CD) concepts
- Hands-on experience with Git

The following Cisco courses can help you gain the knowledge you need to prepare for this course:

- Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC)
- Developing Applications Using Cisco Core Platforms and APIs (DEVCOR)

COURSE OBJECTIVES:

After taking this course, you should be able to:

- Describe the DevOps philosophy and practices, and how they apply to real-life challenges
- Explain container-based architectures and available tooling provided by Docker
- Describe application packaging into containers and start building secure container images
- Utilize container networking and deploy a three-tier network application
- Explain the concepts of configuration item (CI) pipelines and what tooling is available
- Implement a basic pipeline with Gitlab CI that builds and deploys applications
- Implement automated build testing and validation
- Describe DevOps principles applied to infrastructure
- Implement on-demand test environments and explain how to integrate them with an existing pipeline
- Implement tooling for metric and log collection, analysis, and alerting
- Describe the benefits of application health monitoring, telemetry, and chaos engineering in the context of improving the stability and reliability of the ecosystem
- Describe how to implement secure DevOps workflows by safely handling sensitive data and validating applications
- Explain design and operational concepts related to using a mix of public and private cloud deployments
- Describe modern application design and microservices architectures
- Describe the building blocks of Kubernetes and how to use its APIs to deploy an application
- Explain advanced Kubernetes deployment patterns and implement an automated pipeline
- Explain how monitoring, logging, and visibility concepts apply to Kubernetes

COURSE OUTLINE:

- Introducing the DevOps Model
- Introducing Containers
- Packaging an Application Using Docker
- Deploying a Multitier Application
- Introducing CI/CD
- Building the DevOps Flow
- Validating the Application Build Process
- Building an Improved Deployment Flow
- Extending DevOps Practices to the Entire Infrastructure
- Implementing On-Demand Test Environments at the Infrastructure Level
- Monitoring in NetDevOps
- Engineering for Visibility and Stability
- Securing DevOps Workflows
- Exploring Multicloud Strategies
- Examining Application and Deployment Architectures
- Describing Kubernetes
- Integrating Multiple Data Center Deployments with Kubernetes
- Monitoring and Logging in Kubernetes

SUNSET LEARNING INSTITUTE (SLI) DIFFERENTIATORS:

Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their cloud technology investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

What sets SLI apart is not only our immense selection of trainings options, but our convenient and consistent delivery system. No matter how complex your environment is or where you are located, SLI is sure to have a training solution that you can count on!

Premiere World Class Instruction Team

- All SLI instructors have a four-year technical degree, instructor level certifications and field consulting work experience.
- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

Enhanced Learning Experience

- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

Convenient and Reliable Training Experience

- You have the option to attend classes at any of our established training facilities or from the convenience of your home or office with the use of our HD-ILT network (High Definition Instructor Led Training)
- All Sunset Learning Institute classes are guaranteed to run – you can count on us to deliver the training you need when you need it!

Outstanding Customer Service

- Dedicated account manager to suggest the optimal learning path for you and your team
- Enthusiastic Student Services team available to answer any questions and ensure a quality training experience